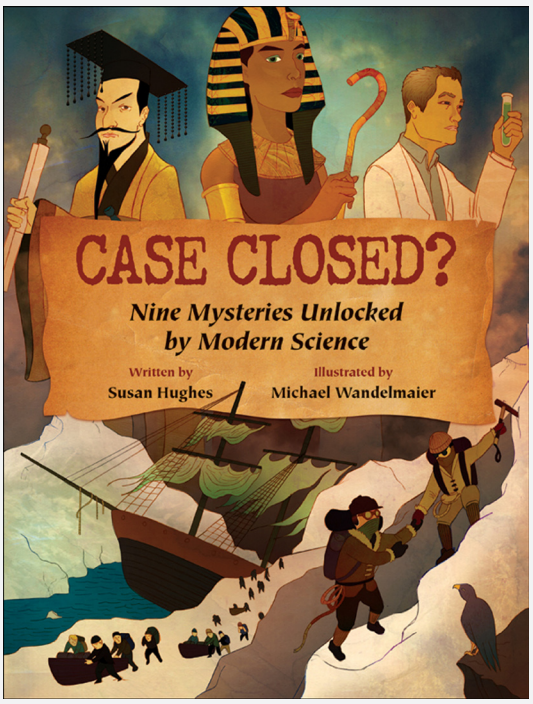
# First Opinion: How Science Came to the Aid of Super Sleuths

Hughes, Susan. Illus. Michael Wandelmaier. *Case Closed?: Nine Mysteries Unlocked by Modern Science*. Toronto, Canada: Kids Can Press, 2010.

*Mark McClenning*




In my childhood I was mesmerized by the ability of movie stars like Richard Chamberlin in *King Solomon's Mines* or Harrison Ford in the *Indiana Jones* series to find great archaeological discoveries with no more information than a map and a book full of notes. Significant discoveries like those are still being found today, but now the modern-day explorer has a new set of tools to help.

This is the setting behind the latest book by author Susan Hughes. *Case Closed? Nine Mysteries Unlocked by Modern Science* takes the reader through the real-life journeys of modern archaeologists/researchers and the teams of experts they assemble in their quests to discover unsolved mysteries that have left many researchers bewildered for many years. Occurring across the globe and throughout the history of civilization, these mysteries are now solved with the aid of modern technological applications of scientific knowledge. Hughes does a masterful job of explaining how each use of science and technology was

needed to give the researchers the clues they needed to solve the mystery.

The quests start in ancient Egypt with the hope of finding the missing pharaoh Hatshepsut. Even though many mummies are found, it takes the incorporation of CAT scans and dental experts to find the real pharaoh's body. The next account is the vanishing voyage of Hsu Fu from mainland China to find a plant with everlasting life. The use of historical re-enactment gives the researchers insights into the reasons for the voyage's demise. Third, we see how the continued search for the City of Ubar uses advances in space technology to find the city's probable location. Of special interest in this chapter is the realization that myth can make more out of history than what is actually true.

Researchers use dendrochronology and computer simulations to determine the probable migration of the ancient Pueblo culture of the Anasazi people from their original homeland, which still has questions unanswered. A combination of historical evidence combined with atomic absorption spectroscopy data of tissue samples of deceased crew members have confirmed the demise and partial trail of the expedition of Sir John Franklin in northern Canada. However, using the most modern technology available, researchers could not find the remains of the ships. Although mitochondrial DNA sequencing could not locate the actual remains of Anastasia Romanov, it did confirm the false claims of Polish woman Anna Anderson that she was the famous Russian princess.

Sometimes, modern technology cannot help as much as the expertise used when analyzing data. The ability to determine locations from different kinds of photographs helped locate the body of George Leigh Mallory on Mount Everest. Modern meteorological science was helpful in understanding why the commercial airliner Stardust slammed into the side of the Andes Mountains back in 1947. Our understanding of jet streams today was not available to the crew at that time. Still, not all mysteries can be solved. Even with all of our current information, we have still not found the wreckage of one of the most famous pilots, Amelia Earhart. Modern sonar equipment combined with the use of a remotely operated vehicle (ROV) was needed to find the long-lost Israeli submarine Dakar 10,000 feet deep in the Mediterranean Sea. During the search, the team also found ancient Phoenician ships 2,700 to 2,800 years old.

Hughes uses artful writing in both fiction and nonfiction to combine the elements of history and science and weave them into an easy to read story. The publisher, Kids Can Press, designates this book for use with 9-12 year old students. I can see this book can be used in an integrated approach across the subjects of reading, history, and science to give the students a continuing learning process using one of the chapters in the book. I especially appreciate Hughes' lack of explanation of the scientific terms in the stories, which leaves the freedom for the classroom teacher to decide in how much depth he/she wishes to explain the scientific principles involved. The real-life stories can then be used in any or all classes.

The other aspect of the book I really like is the use of stories from all different cultures.

This gives the book a very pronounced world view, showing that everyone's culture has the same type of stories woven throughout its history. This would give a teacher opportunity to use stories from more cultures, especially from the cultures of the students in the class, to make more connections for students to become engaged in their learning process.

The only point that I do not like about the book is that the captions are the same font size as the regular text. Even though the captions are in bold print, the font chosen does not have a dramatic difference to bold and non-bold print. I found myself accidentally reading the captions instead of continuing with the main script of the chapter.

I encourage any teacher of 4th through 6th grade classes to check out this book and see if it can be useful in your classroom. I think the stories have great potential for multiple learning experiences.

## About the Author

**Mark McClenning** is a Woodrow Wilson Teaching Fellow finishing up his Master's of Science Education at Purdue this summer. He is also starting the Agriculture Department at South Central High School in Union Mills, IN and looking forward to going to FFA events with the students.